

2017**M. Phil.****2nd Semester Examination****LIFE SCIENCE****PAPER — LSC-123***Full Marks ; 40**Time : 2 Hours*

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

(Structural Elucidation of Biomolecules)

Answer all questions.

Group - A

1. Answer any *four* questions from the following : 4×2
- (a) What are deoxysngars? Give an example.
 - (b) Write the conversion reaction of folate to its active functional form.
 - (c) State the interrelationship between structure and function of cellulose.

(Turn Over)

- (d) What are photoncogene and tumor supressor gene? 4
- (e) What do you mean by domains and motifs. 2
- (f) What is tumor metastasis? 2

Group - B

2. Answer any *four* questions : 4×4
- (a) What is inositol? Discuss its different isomeric structures. $1\frac{1}{2} + 2\frac{1}{2}$
- (b) What is rancidity? State the types and reactions of rancidity. 1+3
- (c) Describe the role of vitamins B₆ as coenzyme in transamination reaction. 4
- (d) Briefly discuss the major steps of tumor angigenesis. 4
- (e) Write down the basis of developing Ramachandran Plot mentioning its significance. 4
- (f) Write the chemical structure and uses of papaverine. 4

Group - C

3. Answer any *two* questions : 2×8

- (a) Write the basic composition and density differences of plasma lipoproteins.

State the metabolism of chylomicron. What is 'Remnant CM' ? 1+1+4+2

- (b) (i) "The three dimensional structure of a protein is dictated by primary structure"—Justify the statement by an experimental evidence.

- (ii) Write briefly on α -helix structure of protein with specific preference of amino acids to participate in it. 4+4

- (c) Describe the chemical structure of different carotenoids present in higher plants. Discuss briefly the physic-chemical properties of carotenoids.

5+3
